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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,627	11/17/2000	Masakazu Hattori	04329.2460	8897

22852 7590 04/11/2003

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

LE, MIRANDA

ART UNIT

PAPER NUMBER

2177

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/714,627

Applicant(s)

MASAKAZU HATTORI,
YOKOHAMA-SHI

Examiner

Miranda Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 2, 3 are objected to because of the following informalities: It is unclear to what "going round" (in claim 2), and "goes round" (in claim 3) refer. Appropriate correction is required.
2. Claim 4 is objected to because of the following informalities: the clause "after the completion of whole the generation of said search plan" does not make sense in this context. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors.

In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US Patent No. 6,377,946 B1), in view of Harel et al. (US Patent No. 5,873,081).

5. As to claims 1, 12, 13, Okamoto teaches "accepting a search request in the form of a logical structured document" at col. 21, lines 7-16

"analyzing the accepted search request for generating a search graph" at col. 21, lines 17-28;

Okamoto does not explicitly teach the following limitations; however, Harel teaches "generating a search plan indicating a search processing procedure for said structured document database from said search graph, by using index information concerning actual data in said structured document database" at col. 4, lines 6-26;

"acquiring search results satisfying said search request by executing said search plan" at col. 9, lines 32-45, col. 10, lines 4-21.

Thus, it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Okamoto with the teachings of Harel to include "generating a search plan indicating a search processing procedure for said structured document database from said search graph, by using index information concerning actual data in said structured document database; and acquiring search results satisfying said search request by executing said search plan" in order to determine which document in the stream of incoming document match which queries in a collection of the user queries, as taught by Harel in col. 1, lines 10-13.

6. As per claim 14, Okamoto teaches "a logical structured document database containing an actual data" see Fig. 2, element 219;

“an index information storing section configured to store index information concerning the actual data in said logical structured document database” see Fig. 2, element 218;

“a search request accepting section configured to accept a search request from outside” at col. 21, lines 7-16;

Okamoto does not explicitly teach the following limitations; however, Harel teaches “a search graph generating section configured to generate a search graph, based on said search request” at col. 4, lines 6-26;

“a search plan generating section configured to generate a search plan indicating a search processing procedure for said structured document database, from said search graph, by using index information concerning the actual data in said logical structured document database” at col. 4, lines 6-26;

“a search plan executing section configured to acquire search results satisfying said search request by executing said search plan” at col. 9, lines 32-45.

Thus, it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Okamoto with the teachings of Harel to include “a search graph generating section configured to generate a search graph, based on said search request”, “a search plan generating section configured to generate a search plan indicating a search processing procedure for said structured document database, from said search graph, by using index information concerning the actual data in said logical structured document database”, “a search plan executing section configured to acquire search results satisfying said search request by executing said search plan”, in order to provide the method and mechanism for a large retrieval system involving a relatively

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large number of incoming documents and a relatively large numbers of queries, as taught by Harel in col. 1, lines 60-67.

7. As per claim 2, Okamoto teaches “in the generation of said search plan, an optimal search plan is generated by going round said search graph, by using effectively said index information” at col. 47, lines 25-45.
8. As per claim 3, Harel teaches “the method goes round said search graph based on a strategy to evaluate preferentially to the evaluatable partial graph in said search graph” at col. 12, lines 23-35, col. 13, lines 8-23.
9. As per claim 4, Harel teaches “the search plan is executed after the completion of whole the generation of said search plan” at col. 9, lines 21-31, col. 4, lines 6-26, col. 9, lines 32-45.
10. As per claim 5, Harel teaches “generation and execution of said search plan are performed alternately” at col. 11, line 56 to col. 12, line 6.
11. As per claim 6, Okamoto teaches “said structured document database includes a hierarchical structure concerning element name and element value; said search request includes search conditions concerning said element name and said element value” see Fig. 73.

“said index information includes at least one of data creation index including information for specifying said element value creation position in said structured document database and element name occurrence index including information for specifying said element name creation position in said structured document database” at col. 47, lines 25-45.

12. As per claim 7, Okamoto teaches “said element name occurrence index includes information indicating said element name creation position by a parent element one rank higher in hierarchy of the partial structure where said element name is generated” see Fig. 73.

13. As per claim 8, Okamoto teaches “in the generation of said search plan, said search plan is generated by: selecting a plan generation rule, based on a plan generation rule base where a plurality of plan generation rules including information indicating rule application conditions and information indicating the search processing contents to compose said search plan are registered, applying the plan generation rule to the element of said search graph, and deciding a search processing included in the plan generation rule as one search processing constituting said search plan” at col. 36, lines 1-16;

“repeating selection and application of the plan generation rule and decision of the following search processing in said search plan, concerning said search graph element influenced by the results of application of said plan generation rule” at col. 36, lines 17-49.

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14. As per claim 9, Harel teaches "cost information decided by considering said index information is added to said plan generation rule" at col. 13, lines 8-23;

Okamoto teaches "the applicable plan generation rule is selected dynamically by taking account of said cost information" at col. 26, lines 1-49.

15. As per claim 10, Okamoto teaches, "said plan generation rule can be arbitrarily registered or deleted in said plan generation rule base" at col. 36, lines 1-49.

16. As per claim 11, Harel teaches, "said search graph is generated based on the syntax analysis results of the description of said search request, in the generation of said search graph in col. 4, lines 6-26, col. 9, lines 32-45.

Conclusion


17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (703) 305-3203. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703) 305-9790. The fax number to this Art Unit is (703) 746-7238. The TC 2100's Customer Service number is (703) 306-5631.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Miranda Le
April 5, 2003


GRETA ROBINSON
PRIMARY EXAMINER

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes **incorporated** therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.